

Remarks/Arguments

Amendments to the Specification

Applicant has amended the instant specification to replace the word “shame” with the word “sham”. The word “sham” is used in the context of an experimental control in which the control animal(s) or cell line is subject to the same experimental conditions as the experimental subject except that there is no actual exposure to SELF currents.

Rejections of Claims 61-68, 70, 72, 74, and 76 under § 112, first paragraph

The Examiner rejected Claims 61-68, 70, 72, 74, and 76 under 35 U.S.C. § 112, first paragraph for failing to comply with the enablement requirement. Specifically, the Examiner states that the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and use the invention. Applicant has cancelled Claims 61-68, 70, 72, 74, and 76 under § 112, first paragraph thereby rendering the rejections of those claims moot.

New Claims

Applicant has added new Claims 77-84 claiming a method of selectively interfering with pathological cells' survival process in vitro and in vivo comprising applying SELF non-thermal fields to said pathological cells, where the SELF non-thermal fields have intensity in the range between 1 and 100 mT. Applicant courteously submits that support for these new claims can be found in the specification of the instant application and respectfully requests passage to allowance of these new claims.

Applicant courteously notes that the instant specification contains sufficient information under § 112, first paragraph to enable one skilled in the art to make and use the claimed invention. Applicant notes that Figures 1-4 depict in visual form an apparatus for practicing the claimed method. In addition, a detailed written description of the apparatus can be found from page 10, line 20 through page 12, line 2 of the instant application. Specifically, figure 1 portrays a device with two coils surrounding a wall enclosing a working environment

within which the pathological cells are exposed. Also shown are both AC and DC sources to enable the user to expose the pathological cells to both types of SELF current. Figure 2 depicts an electrical schematic diagram showing components and their connections for subjecting pathological cells to SELF currents. Alternate embodiments of such "SELF devices" are shown in Figures 3 and 4 and explained in the specification from page 11, line 11, through page 12, line 2.

Applicant further notes that examples are provided to describe specific methodology for both in vitro and in vivo exposure of pathological cells to SELF currents. Specifically, Example I demonstrates the capability of inducing apoptosis in vitro in pathological cells (human colon carcinoma – WiDr). Table 1 shows that apoptosis occurs using S (static) and or ELF (extremely low frequency – ELF) electromagnetic fields at a field intensity of 2 mT or greater. Example II show that SELF currents work selectively in vitro on pathological (malignant) cells lines as opposed to the normal cell line exposed to the same currents. Example III studied the effect of SELF exposure in nude mice injected with WiDr cells to induce tumour growth. The results demonstrate a decrease in tumor mass in mice exposed to SELF currents. The results of Example IV demonstrate a tendency toward an increased survival rate in nude mice inoculated with WiDr carcinoma cells.

Applicant respectfully submits that new claims 77-84 are supported by the instant application under 35 U.S.C. § 1112, first paragraph and courteously urges passage to allowance of those claims.

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Conclusion

Applicant respectfully submits that the present application is now in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully submitted,



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